

CONTENTS

(Abstracts / contents list published in: *Biological Abstracts*, *Current Contents AB & ES*, *Ecological Abstracts*, *Ecology Abstracts*, *Environment Abstracts*, *Environmental Periodicals Bibliography (EPB)*)

Editorial

About pour journal: Ecological Modelling

S.E. Jørgensen (Copenhagen, Denmark) 1

Hydrological modeling of acidified Canadian watersheds

A.G. Bobba and D.C.L. Lam (Burlington, Ont., Canada) 5

Protein and fat dynamics in fish: a bioenergetic model applied to aquaculture

O.J. Cacho (Auburn, AL, U.S.A.) 33

Model estimation of excess CO₂ distribution in biosphere structure

V.F. Krapivin and L.P. Vilkova (Moscow, U.S.S.R.) 57

Evaluation – by cluster analysis – of descriptors for the establishment of significant subunits in Antarctic soils

M. Böller (Kiel, Federal Republic of Germany) 79

Dynamic 2-D model of plant communities

V.V. Galitsky (Pushchino, U.S.S.R.) 95

SPECOM – a single tree model of pine stand / raw humus soil ecosystem

O.G. Chertov (Leningrad, U.S.S.R.) 107

Use of simulation methods for determining critical leaf water potential for stomatal closure in field conditions

N. Katerji (Thiverval Grignon, France) 133

A composite landscape ecology prognostic expert system – COLEPES,

Part I. System philosophy and design

Z. Štěrbáček, V. Škopek (České Budějovice, Czechoslovakia) and V. Zavázel (Prague, Czechoslovakia) 145

Dipodomys populations as energy-processing systems: regulation, competition, and hierarchical organization

B.A. Maurer (Tucson, AZ, U.S.A.) 157

Simulation of cotton rat population dynamics and response to rodenticide applications in Florida sugarcane

C.L. Montague, L.W. Lefebvre, D.G. Decker (Gainesville, FL, U.S.A.) and N.R. Holler (Auburn, AL, U.S.A.) 177

Application of a formal specification language to animal ecology. I. Environment

D.E. Abel and B.S. Niven (Brisbane, Qld., Australia) 205

Discussion Paper

Theory and model or art and technology in ecology

G.I. Ågren and E. Bosatta (Uppsala, Sweden) 213

Letters to the Editor

221

Guide for Authors

225